

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-5. (Canceled)

6. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming, over a substrate, a metal layer, an oxide layer in contact with the metal layer, and a layer to be peeled including a semiconductor element over the oxide layer;

bonding a support to the layer to be peeled;

oxidizing the metal layer to form a metal oxide layer between the metal layer and the oxide layer after bonding the support to the layer to be peeled; and

peeling the layer to be peeled that is bonded to the support from the substrate ~~with a physical means~~ within the metal oxide layer, at an interface between the metal oxide layer and the oxide layer, or at an interface between the metal oxide layer and the metal layer after bonding ~~[[a]]~~ the support ~~[[and]]~~ to the layer to be peeled,

wherein oxidizing the metal layer is conducted with irradiation of a laser beam ~~having a wavelength from 100nm to 10µm.~~

7. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming an insulator layer on a substrate, a metal layer in contact with the insulator layer, an oxide layer in contact with the metal layer, and a layer to be peeled including a semiconductor element above the oxide layer;

bonding a support to the layer to be peeled;

oxidizing the metal layer to form a metal oxide layer between the metal layer and the insulating layer, between the metal layer and the oxide layer, or both between the metal layer and the insulating layer and between the metal layer and the oxide layer after bonding the support to the layer to be peeled; and

peeling the layer to be peeled that is bonded to the support from the substrate ~~with a physical means~~ within the metal oxide layer in contact with the insulating layer, at an interface between the metal oxide layer in contact with the insulating layer and the insulating layer, at an interface between the metal oxide layer in contact with the insulating layer and the metal layer, within the metal oxide layer in contact with the oxide layer, at an interface between the metal oxide layer in contact with the oxide layer and the oxide layer, or at an interface between the metal oxide layer in contact with the oxide layer and the metal layer after bonding ~~[[a]]~~ the support ~~[[and]]~~ to the layer to be peeled,

wherein oxidizing the metal layer is conducted with irradiation of a laser beam ~~having a wavelength from 100nm to 10μm.~~

8. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming, over a substrate, a metal layer, an oxide layer in contact with the metal layer, and a layer to be peeled including a semiconductor element over the oxide layer;

bonding a support to the layer to be peeled;

oxidizing the metal layer to form a metal oxide layer between the metal layer and the oxide layer after bonding the support to the layer to be peeled; and

peeling the layer to be peeled that is bonded to the support from the substrate ~~with a physical means~~ at a portion between the metal layer and the oxide layer,

wherein oxidizing the metal layer is conducted with irradiation of a laser beam ~~having a wavelength from 100nm to 10μm.~~

9. (Previously Presented) The method according to claim 6, wherein oxidizing the metal film is conducted with heat treatment or compound treatment of irradiation of the laser beam and heat treatment.

10. (Previously Presented) The method according to claim 6, wherein the laser beam is light emitted from a continuous wave oscillation or pulse oscillation solid laser.

11. (Previously Presented) The method according to claim 6, wherein the metal layer is a single layer comprising an element selected from Ti, Ta, W, Mo, Cr, Nd, Fe, Ni, Co, Zr, and Zn, or one of an alloy material and a compound material including the element as its main component, or a lamination layer thereof.

12. (Previously Presented) The method according to claim 6, wherein the oxide layer in contact with the metal layer is a silicon oxide film formed by sputtering.

13. (Previously Presented) The method according to claim 6, wherein the substrate is a glass substrate or a quartz substrate, and the support is a plastic substrate or a plastic base material.

14. (Previously Presented) The method according to claim 6, wherein the layer to be peeled includes a thin film transistor, a photoelectric conversion element comprising a PIN junction of silicon, an organic light-emitting element, an element comprising a liquid crystal, a memory element, a thin film diode, or a silicon resistor element.

15. (Previously Presented) The method according to claim 7, wherein oxidizing the metal film is conducted with heat treatment or compound treatment of irradiation of the laser beam and heat treatment.

16. (Previously Presented) The method according to claim 7, wherein the laser beam is light emitted from a continuous wave oscillation or pulse oscillation solid laser.

17. (Previously Presented) The method according to claim 7, wherein the metal layer is a single layer comprising an element selected from Ti, Ta, W, Mo, Cr, Nd, Fe, Ni, Co, Zr, and Zn, or one of an alloy material and a compound material including the element as its main component, or a lamination layer thereof.

18. (Previously Presented) The method according to claim 7, wherein the oxide layer in contact with the metal layer is a silicon oxide film formed by sputtering.

19. (Previously Presented) The method according to claim 7, wherein the substrate is a glass substrate or a quartz substrate, and the support is a plastic substrate or a plastic base material.

20. (Previously Presented) The method according to claim 7, wherein the layer to be peeled includes a thin film transistor, a photoelectric conversion element comprising a PIN junction of silicon, an organic light-emitting element, an element comprising a liquid crystal, a memory element, a thin film diode, or a silicon resistor element.

21. (Previously Presented) The method according to claim 8, wherein oxidizing the metal film is conducted with heat treatment or compound treatment of irradiation of the laser beam and heat treatment.

22. (Previously Presented) The method according to claim 8, wherein the laser beam is light emitted from a continuous wave oscillation or pulse oscillation solid laser.

23. (Previously Presented) The method according to claim 8, wherein the metal layer is a single layer comprising an element selected from Ti, Ta, W, Mo, Cr, Nd, Fe, Ni, Co, Zr, and Zn, or one of an alloy material and a compound material including the element as its main component, or a lamination layer thereof.

24. (Previously Presented) The method according to claim 8, wherein the oxide layer in contact with the metal layer is a silicon oxide film formed by sputtering.

25. (Previously Presented) The method according to claim 8, wherein the substrate is a glass substrate or a quartz substrate, and the support is a plastic substrate or a plastic base material.

26. (Previously Presented) The method according to claim 8, wherein the layer to be peeled includes a thin film transistor, a photoelectric conversion element comprising a PIN junction of silicon, an organic light-emitting element, an element comprising a liquid crystal, a memory element, a thin film diode, or a silicon resistor element.

27. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a metal layer over a substrate,

forming an oxide layer on the metal layer, wherein a metal oxide layer is formed between the metal layer and the oxide layer,

forming a layer to be peeled including a semiconductor element over the oxide layer;

bonding a support to the layer to be peeled;

irradiating the metal layer with a laser after bonding the support to the layer to be peeled; and

peeling the layer to be peeled that is bonded to the support from the substrate ~~with a physical means~~ at a portion between the metal layer and the oxide layer;

~~wherein oxidizing the metal layer is conducted with irradiation of a laser beam having a wavelength from 100nm to 10μm.~~

28. (Previously Presented) The method according to claim 27, wherein the metal layer is a single layer comprising an element selected from Ti, Ta, W, Mo, Cr, Nd, Fe, Ni, Co, Zr, and Zn, or one of an alloy material and a compound material including the element as its main component, or a lamination layer thereof.

29. (Previously Presented) The method according to claim 27, wherein the oxide layer in contact with the metal layer is a silicon oxide film formed by sputtering.

30. (Previously Presented) The method according to claim 27, wherein the substrate is a glass substrate or a quartz substrate, and the support is a plastic substrate or a plastic base material.

31. (Previously Presented) The method according to claim 27, wherein the layer to be peeled includes a thin film transistor, a photoelectric conversion element comprising a PIN junction of silicon, an organic light-emitting element, an element comprising a liquid crystal, a memory element, a thin film diode, or a silicon resistor element.

32. (Previously Presented) The method according to claim 27, wherein the metal oxide layer is formed after forming the oxide layer.

33. (Previously Presented) The method according to claim 27, wherein oxidizing the metal film is conducted with heat treatment or compound treatment of irradiation of the laser beam and heat treatment.

34. (Previously Presented) The method according to claim 27, wherein the laser beam is light emitted from a continuous wave oscillation or pulse oscillation solid laser.

35. (New) The method according to claim 6, wherein the oxide layer is formed between the metal layer and the substrate.

36. (New) The method according to claim 7, wherein the oxide layer is formed between the metal layer and the substrate.

37. (New) The method according to claim 8, wherein the oxide layer is formed between the metal layer and the substrate.

38. (New) The method according to claim 27, wherein the oxide layer is formed between the metal layer and the substrate.